

July 2015

## Miami County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 20 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Miami County economy.<sup>1</sup> These 20 sectors have a total direct output of approximately \$140 million and support 1,448.2 jobs in Miami County. Running the model for all 20 sectors simultaneously produces the following results:

#### Agriculture Contribution in Miami County

Impact Type <sup>2</sup>	Employment	% of Total Employment	Total Value Added <sup>3</sup>	% of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	% of Gross Regional Product
Direct Effect	1,448.2	13%	\$54,499,625	8%	\$140,070,206	20%
Indirect Effect	103.7	1%	\$7,440,020	1%	\$12,372,341	2%
Induced Effect	68.0	1%	\$5,423,047	1%	\$8,815,984	1%
Total Effect	1,619.9	15%	\$67,362,693	9%	\$161,258,530	23%

As shown in the above table, agriculture, food, and food processing supports 1,619.9 jobs, or 15% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$161 million, roughly 23% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 20 agriculture, food, and food processing sectors is approximately \$67 million, or 9% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 9% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:  
[https://implan.com/index.php?option=com\\_content&view=category&id=19](https://implan.com/index.php?option=com_content&view=category&id=19)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

<sup>4</sup> GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

<sup>5</sup> Output = Intermediate Inputs + Value Added

In the top ten by employment, All other crop farming is the top employer in the agriculture industry with 432.4 employees. This table also shows the amount of jobs that are created by the agriculture industry in Miami County.

**Top 10 Industries Affected by Employment**

Sector Description:	Total Employment	Total Output
All other crop farming.....	432.4	\$16,204,982
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	361.2	\$27,637,988
Grain farming .....	127.2	\$13,154,062
Landscape and horticultural services .....	114.7	\$7,137,049
Dairy cattle and milk production.....	110.2	\$6,060,507
Greenhouse, nursery, and floriculture production .....	57.0	\$2,970,857
Animal production, except cattle and poultry and eggs.....	54.0	\$1,615,041
Veterinary services .....	44.7	\$2,738,616
Support activities for agriculture and forestry .....	39.3	\$2,246,612
Animal, except poultry, slaughtering.....	33.7	\$19,802,298

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately \$28 million to Miami County’s economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

**Top 10 Industries Affected by Output**

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming.....	361.2	\$27,637,988
Animal, except poultry, slaughtering.....	33.7	\$19,802,298
Oilseed farming .....	30.5	\$19,482,058
All other crop farming.....	432.4	\$16,204,982
Grain farming .....	127.2	\$13,154,062
Farm machinery and equipment manufacturing.....	17.1	\$10,786,562
Landscape and horticultural services .....	114.7	\$7,137,049
Dairy cattle and milk production.....	110.2	\$6,060,507
All other food manufacturing .....	12.9	\$4,129,708
Greenhouse, nursery, and floriculture production .....	57.0	\$2,970,857

